

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 01168815
PUBLICATION DATE : 04-07-89

APPLICATION DATE : 25-12-87
APPLICATION NUMBER : 62326704

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INT.CL. : C21D 8/12 C22C 38/00 C22C 38/06

TITLE : MANUFACTURE OF NON-ORIENTED MAGNETIC STEEL SHEET

ABSTRACT : PURPOSE: To obtain the title non-oriented magnetic steel sheet having low iron loss and excellent magnetic flux density by hot-rolling, annealing, cold-rolling, and then again annealing a steel having specified contents of C, Si, Mn, P, S, Al, N, and Fe under specified conditions.

CONSTITUTION: A steel contg., by weight, 0.005~0.010% C, ≤1.5% Si, 0.1~1.0% Mn, ≤0.15% P, ≤0.01% S, ≤0.3% Al, ≤0.007% N, the balance Fe, and inevitable impurity elements is refined into a slab. The slab is heated, hot-rolled, and then further hot-rolled in the temp. range from the median of the Ar₃ and Ar₁ to 750°C. The obtained hot-rolled band steel is briefly annealed for ≤5 min in the temp. range from Ar₁ to (Ar₃+50°C), pickled, and then cold-rolled to a finishing thickness. The cold-rolled steel sheet is briefly decarburizing- annealed for 10sec to 5min in the temp. range below Ar₃ to reduce the C content to <0.005%. By this method, a non-oriented magnetic steel sheet having low iron loss and excellent magnetic flux density is easily obtained.

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